



## How to Protect Yourself When Cleaning Up After a Flood

Flooding is associated with the disruption of water purification and sewage disposal systems, overflowing of toxic waste sites, and dislodgement of chemicals previously stored above ground. Although most floods do not cause serious outbreaks of infectious disease or chemical poisonings, they can cause sickness in workers and others who come in contact with contaminated floodwater.

### Floodwater

Floodwater often contains infectious organisms, including intestinal bacteria such as *E. coli*, *Salmonella*, and *Shigella*, Hepatitis A virus, and agents of typhoid, paratyphoid, and tetanus. The signs and symptoms experienced by the victims of waterborne microorganisms are similar, even though they are caused by different pathogens. These symptoms include nausea, vomiting, diarrhea, abdominal cramps, muscle aches, and fever. Most cases of sickness associated with flood conditions are brought about by ingesting contaminated food or water. Tetanus, however, can be acquired from contaminated soil or water entering broken areas of the skin, such as cuts, abrasions, or puncture wounds.

Floodwaters also may be contaminated by agricultural or industrial chemicals, or by hazardous agents present at flooded hazardous waste sites. Flood cleanup crew members who must work near flooded industrial sites also may be exposed to chemically contaminated floodwater. Although different chemicals cause different health effects, the signs and symptoms most frequently associated with chemical poisoning are headaches, skin rashes, dizziness, nausea, excitability, weakness, and fatigue.

Pools of standing water become breeding grounds for mosquitoes, increasing the risk of encephalitis. The presence of wild animals in populated areas increases the risk of diseases caused by animal bites (e.g., rabies) as well as diseases carried by fleas and ticks.

### Protect Yourself

After a major flood, it is often difficult to maintain good hygiene during cleanup operations. To avoid waterborne disease, it is important to wash your hands with soap and clean, running water, especially before work breaks, meal breaks, and at the end of the work shift. You should assume that any

water in flooded or surrounding areas is not safe unless the local or state public health department has specifically declared it to be safe. If no safe water supply is available for washing, use bottled water, water that has been boiled for at least 10 minutes, or chemically disinfected water (use 5 drops of liquid household bleach to each gallon of water). Water storage containers should be rinsed periodically with a household bleach solution.

Water that is suspected of being contaminated with hazardous chemicals may require the use of special chemical protective outer clothing and goggles. Before entering a contaminated area that has been flooded, you should don plastic or rubber gloves, boots, and other protective clothing needed to avoid contact with floodwater. Use insect repellent and cover skin areas with clothing as much as possible to reduce the risk of insect bites. If skin contacts floodwater, it should be washed as soon as possible with soap and clean water.

### What to Do If Symptoms Develop

If a cleanup worker experiences any of the signs or symptoms listed above, appropriate first-aid treatment and medical advice should be sought. If broken skin has come into contact with potentially contaminated water, a tetanus vaccination may be needed (depending on the individual's vaccination history).

### Tips to Remember

- Before working in flooded areas, be sure your tetanus shot is current (given within the last 10 years).
- Keep an adequate supply of potable water available for drinking.
- Consider all water unsafe until local authorities announce that the public water supply is safe.
- Keep an adequate supply of safe water available for washing.
- Be alert for chemically contaminated floodwater at industrial sites.
- If the safety of a food or beverage is questionable, throw it out.
- Seek immediate medical care for all animal bites.
- Avoid insect bites.

## OSHA Area Offices

Area	Telephone	Area	Telephone	Area	Telephone
Albany, NY	(518) 464-4338	Denver, CO	(303) 844-5285	Nashville, TN	(615) 781-5423
Albuquerque, NM	(505) 248-5302	Des Plaines, IL	(847) 803-4800	New York, NY	(212) 466-2482
Allentown, PA	(610) 776-0592	Des Moines, IA	(515) 284-4794	Norfolk, VA	(757) 441-3820
Anchorage, AK	(907) 271-5152	Englewood, CO	(303) 843-4515	North Aurora, IL	(630) 896-8700
Appleton, WI	(920) 734-4521	Erie, PA	(814) 833-5758	Oklahoma City, OK	(405) 231-5351
Augusta, ME	(207) 622-8417	Fort Lauderdale, FL	(954) 424-0242	Omaha, NE	(402) 221-3182
Austin, TX	(512) 916-5783	Fort Worth, TX	(817) 428-2470	Parsippany, NJ	(973) 263-1003
Avenel, NJ	(908) 750-3270	Frankfort, KY	(502) 227-7024	Peoria, IL	(309) 671-7033
Baton Rouge, LA	(225) 389-0474	Harrisburg, PA	(787) 277-1560	Philadelphia, PA	(215) 597-4955
Bayside, NY	(718) 279-9060	Hartford, CT	(860) 240-3152	Phoenix, AZ	(602) 640-2007
Bellevue, WA	(206) 553-7520	Hasbrouck Heights, NJ	(201) 288-1700	Pittsburgh, PA	(412) 395-4903
Billings, MT	(406) 247-7499	Honolulu, HI	(808) 541-2685	Portland, OR	(503) 326-2251
Birmingham, AL	(205) 731-1534	Houston, TX	(281) 286-0583	Providence, RI	(401) 528-4669
Bismarck, ND	(701) 250-4521	Houston, TX	(281) 591-2438	Raleigh, NC	(919) 856-4770
Boise, ID	(208) 321-2960	Indianapolis, IN	(317) 226-7290	Salt Lake City, UT	(801) 487-0680
Bowmansville, NY	(716) 684-3891	Jackson, MS	(601) 965-4606	San Francisco, CA	(619) 557-2909
Braintree, MA	(617) 565-6924	Jacksonville, FL	(904) 232-2895	Savannah, GA	(912) 652-4393
Bridgeport, CT	(203) 579-5581	Kansas City, MO	(816) 483-9531	Smyrna, GA	(770) 984-8700
Calumet City, IL	(708) 891-3800	Lansing, MI	(517) 377-1892	Springfield, MA	(413) 785-0123
Carson City, NV	(702) 885-6963	Linthicum, MD	(410) 865-2055	St. Louis, MO	(314) 425-4249
Charleston, ArV	(304) 347-5937	Little Rock, AR	(501) 324-6291	Syracuse, NY	(315) 451-0808
Cincinnati, OH	(513) 841-4132	Lubbock, TX	(806) 472-7681	Tampa, FL	(813) 626-1177
Cleveland, OH	(216) 522-3818	Madison, WI	(608) 264-5388	Tarrytown, NY	(914) 524-7510
Columbia, SC	(803) 765-5904	Marlton, NJ	(609) 757-5181	Toledo, OH	(419) 259-7542
Columbus, OH	(614) 469-5582	Methuen, MA	(617) 565-8110	Tucker, GA	(770) 493-6644
Concord, NH	(603) 225-1629	Milwaukee, WI	(414) 297-3315	Westbury, NY	(516) 334-3344
Corpus Christi, TX	(512) 888-3420	Minneapolis, MN	(612) 664-5460	Wichita, KS	(316) 269-6644
Dallas, TX	(214) 320-2400	Mobile, AL	(334) 441-6131	Wilkes-Barre, PA	(717) 826-6538
				Wilmington, DE	(302) 573-6115

## OSHA Consultation Project Directory

Regional Offices	Telephone	State	Telephone	State	Telephone
<i>Region I</i>		Alabama	(205) 348-3033	New Hampshire	(603) 271-2024
Boston, MA	(617) 565-9860	Alaska	(907) 269-4957	New Jersey	(609) 292-3923
<i>Region II</i>		Arizona	(602) 542-5795	New Mexico	(505) 827-4230
New York, NY	(212) 337-2378	Arkansas	(501) 682-4522	New York	(518) 457-2238
<i>Region III</i>		California	(415) 703-5270	North Carolina	(919) 807-2905
Philadelphia, PA	(215) 596-1201	Colorado	(970) 491-6151	North Dakota	(701) 328-5188
<i>Region IV</i>		Connecticut	(860) 566-4550	Ohio	(614) 644-2246
Atlanta, GA	(404) 562-2300	Delaware	(302) 761-8219	Oklahoma	(405) 528-1500
<i>Region V</i>		District of Columbia	(202) 576-6339	Oregon	(503) 378-3272
Chicago, IL	(312) 353-2220	Florida	(850) 922-8955	Pennsylvania	(724) 357-2396
<i>Region VI</i>		Georgia	(404) 894-2643	Puerto Rico	(787) 754-2171
Dallas, TX	(214) 767-4731	Guam	011- (671) 475-0136	Rhode Island	(401) 222-2438
<i>Region VII</i>		Hawaii	(808) 586-9100	South Carolina	(803) 734-9614
Kansas City, MO	(816) 426-5861	Idaho	(208) 426-3283	South Dakota	(605) 688-4101
<i>Region VIII</i>		Illinois	(312) 814-2337	Tennessee	(615) 741-7036
Denver, CO	(803) 844-3061	Indiana	(317) 232-2688	Texas	(512) 440-3854
<i>Region IX</i>		Iowa	(515) 965-7162	Utah	(801) 530-6901
San Francisco, CA	(415) 975-4310	Kansas	(785) 296-7476	Vermont	(802) 828-2765
<i>Region X</i>		Kentucky	(502) 564-6895	Virginia	(804) 786-6359
Seattle, WA	(206) 553-5930	Louisiana	(225) 342-9601	Virgin Islands	(809) 772-1315
		Maine	(207) 624-6460	Washington	(360) 902-5638
		Maryland	(410) 880-4970	West Virginia	(304) 558-7890
		Massachusetts	(617) 727-3982	Wisconsin	(608) 266-8579(H)
		Michigan	(517) 322-6823(H)		(414) 521-5063(S)
			(517) 322-1809(S)	Wyoming	(307) 777-7786
		Minnesota	(651) 297-2393		
		Mississippi	(601) 987-3981	(H) - Health	
		Missouri	(573) 751-3403	(S) - Safety	
		Montana	(406) 444-6418		
		Nebraska	(402) 471-4717		
		Nevada	(702) 486-9140		